

Care guide

Northern Emperor Moth Caterpillars, *Syntherata esarlata*



These caterpillars are the larvae of the Northern Emperor Moth found in north-eastern Australia. The adults (moths) of this species are quite varied in colour ranging from brown, rusty-brown, orange, yellow and some even have streaks of pink. The larvae (caterpillars) are initially yellow/brown and covered in stiff hairs. The final instar caterpillars are bright green with a cream stripe along the flank, and have rows of red tubercles all sprouting short stiff hairs. They belong to the family Saturniidae which includes other well-known Australian species such as the Emperor Gum Moth (*Opodiphthera eucalypti*) and the Hercules Moth (*Coscinocera Hercules*).

This species has been recorded as feeding on a wide variety of plants. It is commonly found in north Queensland on Corkwood (*Melicope elleryana*). Once ready to pupate, the caterpillars create a silk cocoon (with silk produced from their mouth parts). The cocoon is brown and oval in shape, with a fibrous appearance. It is usually secured to a stem with a nearby leaf or two woven in to hide the cocoon.

The pupation times can vary depending on temperature, however moths can emerge (eclose) around two weeks after producing the cocoon. Adult Northern Emperor Moths do not possess mouthparts and do not feed. As such they rely on energy stores built up during the larval stage and do not live long as adults. The sole purpose of the adult stage is to reproduce. Males have large feathery antennae which are used to detect the pheromones (airborne hormones) produced by females. Females may begin to produce eggs as soon as day after they emerge from the cocoon, whether they are mated or not. The eggs are creamy white and ovaloid, about 0.5mm in diameter. They are usually laid in clusters. There is no visual difference between infertile and fertile eggs, however those produced by unmated females will not hatch.

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Food: Fresh healthy leaves from Corkwood *Melicope (Euodia) elleryana*, Citrus (Lemon, Grapefruit, Orange, Limes etc), Peppercorn (*Schinus molle*), Cheese Tree (*Glochidion ferdinandi*), and some *Eucalyptus* species. Observe your caterpillar/s to make sure the food plant is being eaten, if not try another of the food plant options. Ensure fresh leaves are always available for your insect. Don't let the leaves dry out or wilt before you change them. The leaves can be put into a jar of water to keep them fresh for as long as possible. Make sure the jar has a lid or covering with holes in it to stop the caterpillars from falling or crawling in and drowning. You can also use a small potted plant.

Water: Caterpillars get most of their moisture via the leaves, but do sometimes require additional moisture. Lightly mist-spray the leaves around your caterpillar once a day – it will drink the droplets if it requires extra moisture.

Enclosure: A suitable enclosure for the caterpillars should allow for some ventilation and allow for humidity to be kept at a reasonably high level. Minimum size requirements are 30cm high x 30cm wide x 30cm deep. Minibeast Wildlife's small pop-up mesh enclosures are ideal. Place the enclosure in a spot where it gets a bit of daylight each day, but be careful it doesn't over heat in direct sunlight. Adult moths can be kept in the same type of enclosure as they do not feed and tend not to fly very much.

Life span/cycle: Eggs: 10-12 days. Caterpillars: ~4 weeks. Pupation: 2+ weeks. Adult moth: 1 week (moths do not feed).

Temperature: This species will do best at 20-26° C, but will tolerate slightly lower temperatures and have a slower growth rate.

Humidity: The humidity should be kept around 70-90% within the enclosure if possible. A lower humidity can result in moulting difficulties, which can result in death.

Handling: The caterpillars are harmless and so are able to be handled, however great care needs to be taken when coaxing them off their branches/leaves. Caterpillars have 6 true legs, and 4 pairs of sucker feet at the end of their bodies. These sucker feet can grip on quite tightly, and care must be taken not to damage them. Observation is very important, and a caterpillar should not be handled when it is approaching a moult. This is when the caterpillar will remain motionless for 1-2 days, and its head will be tucked almost underneath its body. When changing the leaves, caterpillars should be moved on the branch they are sitting on (place the old branch into the enclosure with the new leaves. You can remove any old foliage)

Reproduction: If you happen to have an adult male and female moth emerge at the same time, then mating will occur without any interference.

Common issues: The caterpillars will sometimes climb down into the water container for the leaves and drown if it is accessible, so ensure they cannot get into the water. You may like to use mesh to cover the water, or paper towel to block up any gaps. The caterpillars may also have problems moulting if the humidity is not high enough. Adult butterflies should not be handled, otherwise the scales on their wings will be shed and they can lose the ability to fly.

NOTE: These animals should not be released into the wild.